

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-6. (Cancelled)

7. (Currently Amended) At least one chemical entity chosen from ~~of claim 21~~ wherein ~~the at least one chemical entity is~~ N3-(2-methoxybenzyl)-5-(4-phenoxyphenyl)-pyrazine-2,3-diamine and pharmaceutically acceptable salts thereof.

8-13. (Cancelled)

14. (Currently Amended) At least one chemical entity of claim ~~[[21]]~~ 7 wherein in an in vitro assay of kinase modulation, the at least one chemical entity exhibits an IC₅₀ value less than or equal to 25 micromolar.

15. (Currently Amended) A pharmaceutical composition comprising at least one chemical entity of claim ~~[[21]]~~ 7 and at least one vehicle chosen from pharmaceutically acceptable carriers and excipients.

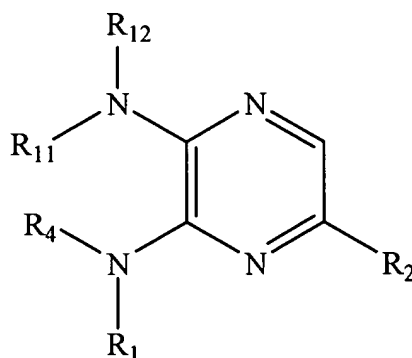
16-25. (Cancelled)

26. (Currently Amended) At least one chemical entity of claim ~~[[25]]~~ 33 wherein in an in vitro assay of kinase modulation, the at least one chemical entity exhibits an IC₅₀ value less than or equal to 25 micromolar.

27. (Currently Amended) A pharmaceutical composition comprising at least one chemical entity of claim [[25]] 33 and at least one vehicle chosen from pharmaceutically acceptable carriers and excipients.

28-32. (Cancelled)

33. (New) At least one chemical entity chosen from compounds of the formula:



and pharmaceutically acceptable salts thereof, wherein

R₁ is chosen from

benzyl, and

substituted benzyl chosen from mono-, di-, and tri-substituted benzyl

wherein the substituents are independently chosen from

hydroxy,

nitro,

cyano,

amino,

halo,

(C₁-C₆)alkyl,

(C₁-C₆)perhaloalkyl,
(C₁-C₆)alkoxy,
(C₁-C₆)alkyloxy-(C₁-C₆)alkoxy,
mono-((C₁-C₆)alkyl)amino,
di((C₁-C₆)alkyl)amino,
mono-((C₁-C₆)alkyl)amino(C₁-C₆)alkyl,
di((C₁-C₆)alkyl)amino(C₁-C₆)alkyl,
amino(C₁-C₆)alkyl,
benzamido,
substituted benzamido chosen from mono-, di-, and tri-substituted
benzamido and wherein the substituents are independently
chosen from hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl,
and (C₁-C₆)alkoxy,
benzenesulfonamido,
substituted benzenesulfonamido chosen from mono-, di-, and tri-
substituted benzenesulfonamido wherein the substituents
are independently chosen from hydroxy, nitro, cyano, amino,
halo, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, and (C₁-C₆)alkoxy,
heteroaryl,
substituted heteroaryl chosen from mono-, di-, and trisubstituted
heteroaryl wherein the substituents are independently
chosen from hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl,
(C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-
C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino,
mono-((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, and di((C₁-
C₆)alkyl)amino(C₁-C₆)alkyl,
benzylamino(C₁-C₆)alkyl,
dibenzylamino(C₁-C₆)alkyl,

substituted benzylamino(C₁-C₆)alkyl chosen from mono-, di-, and trisubstituted benzylamino(C₁-C₆)alkyl wherein the substituents on the benzyl are independently chosen from hydroxy, nitro, cyano, amino, and halo, substituted dibenzylamino(C₁-C₆)alkyl chosen from mono-, di-, and trisubstituted dibenzylamino(C₁-C₆)alkyl wherein the substituents on the benzyl are independently chosen from hydroxy, nitro, cyano, amino, and halo, amino(C₁-C₆)alkyl, and heteroaryl linked to the benzyl by a group chosen from ether, sulfide, (C₁-C₃)carbonyl, and secondary amino;

R₂ is chosen from phenyloxyphenyl, and

substituted phenyloxyphenyl chosen from mono-, di-, and tri-substituted phenyloxyphenyl wherein the substituents are independently chosen from hydroxy, nitro, cyano, amino, halo, sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, and amino(C₁-C₆)alkyl;

R₄ is chosen from

hydrogen,
straight chain (C₁-C₆)alkyl,
branched chain (C₃-C₆)alkyl,
phenyl,
substituted phenyl chosen from mono-, di-, and tri-substituted phenyl wherein the substituents are chosen from hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-

C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, and amino(C₁-C₆)alkyl,
heteroaryl, and
substituted heteroaryl chosen from mono-, di-, and tri-substituted
heteroaryl wherein the substituents are chosen from
hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, and amino(C₁-C₆)alkyl; and

R₁₁ and R₁₂ are independently chosen from

hydrogen,
straight chain (C₁-C₇)alkyl,
branched chain (C₃-C₇)alkyl, in which the branched alkyl chains are
allowed to also form a 3-7 membered ring chosen from
heterocycloalkyl and cycloalkyl rings,
(cyclo(C₃-C₆)alkyl)methyl,
(C₁-C₆)perhaloalkyl,
sulfonamido,
mono-((C₁-C₆)alkyl)amino,
di((C₁-C₆)alkyl)amino,
mono-((C₁-C₆)alkyl)amino(C₁-C₆ alkyl),
di((C₁-C₆)alkyl)amino(C₁-C₆ alkyl),
phenyl,
substituted phenyl chosen from mono-, di-, and tri-substituted
phenyl wherein the substituents are chosen from hydroxy,
nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl,
(C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-

C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, mono-((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, di((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, and amino((C₁-C₆)alkyl),

benzyl,

substituted benzyl chosen from mono-, di-, and tri-substituted

benzyl wherein the substituents are chosen from hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, mono-((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, di((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, and amino((C₁-C₆)alkyl),

heteroaryl,

substituted heteroaryl chosen from mono-, di-, and tri-substituted

heteroaryl wherein the substituents are chosen from hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, mono-((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, di((C₁-C₆)alkyl)amino(C₁-C₆)alkyl, and amino((C₁-C₆)alkyl),

heteroaryloxyphenyl,

substituted heteroaryloxyphenyl chosen from mono-, di-, and tri-

substituted heteroaryloxyphenyl wherein the substituents are independently chosen from hydroxy, nitro, cyano, amino, halo, sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, and amino(C₁-C₆alkyl),

phenoxyphenyl,

substituted phenoxyphenyl chosen from mono-, di-, and tri-substituted phenoxyphenyl wherein the substituents are independently chosen from hydroxy, nitro, cyano, amino, halo, sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy-(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, and amino(C₁-C₆alkyl),

phenyl-piperazinyl,

substituted phenyl-piperazinyl chosen from mono-, di-, and tri-substituted phenyl-piperazinyl wherein the substituents on the phenyl ring are independently chosen from hydroxy, nitro, cyano, amino, halo, sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, mono-(C₁-C₆alkyl)amino(C₁-C₆alkyl), and di(C₁-C₆alkyl)amino(C₁-C₆alkyl),

heteroaryl-piperazinyl, and

substituted heteroaryl-piperazinyl chosen from mono-, di-, and tri-substituted heteroaryl-piperazinyl wherein the substituents on the heteroaryl ring are independently chosen from hydroxy, nitro, cyano, amino, halo, sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, (C₁-C₆)alkoxy, (C₁-C₆)alkyloxy(C₁-C₆)alkoxy, mono-((C₁-C₆)alkyl)amino, di((C₁-C₆)alkyl)amino, mono-(C₁-C₆alkyl)amino(C₁-C₆alkyl), and di(C₁-C₆alkyl)amino(C₁-C₆alkyl).

34. (New) At least one chemical entity of claim 33, wherein
R₁₁ and R₁₂ are independently chosen from

hydrogen,
straight chain (C₁-C₇)alkyl,
branched chain (C₃-C₇)alkyl, in which the branched alkyl chains are
allowed to also form a 3-7 member ring chosen from
heterocycloalkyl and cycloalkyl rings;
phenyl,
benzyl,
heteroaryl,
substituted phenyl chosen from mono-, di-, and tri-substituted phenyl
wherein the substituents are independently chosen from hydroxy,
nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)perfluoroalkyl, and
(C₁-C₆)alkoxy,
substituted benzyl chosen from mono-, di-, and tri-substituted benzyl
wherein the substituents are independently chosen from hydroxy,
nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-C₆)perfluoroalkyl, and
(C₁-C₆)alkoxy,
substituted heteroaryl chosen from mono-, di-, and tri-substituted
heteroaryl wherein the substituents are independently chosen from
hydroxy, nitro, cyano, amino, halo, (C₁-C₆)alkyl, (C₁-
C₆)perfluoroalkyl, and (C₁-C₆)alkoxy,
heteroaryloxyphenyl,
phenyloxyphenyl,
substituted heteroaryloxyphenyl chosen from mono-, di-, and tri-
substituted heteroaryloxyphenyl wherein the substituents are
independently chosen from hydroxy, nitro, cyano, amino, halo,
sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, and (C₁-C₆)alkoxy,
and

substituted phenyloxyphenyl chosen from mono-, di-, and tri-substituted phenyloxyphenyl wherein the substituents are independently chosen from hydroxy, nitro, cyano, amino, halo, sulfonamido, (C₁-C₆)alkyl, (C₁-C₆)perhaloalkyl, and (C₁-C₆)alkoxy.

35. (New) At least one chemical entity of claim 33, wherein R₄ is hydrogen.